

Unit 10

Day 2

Quadratic Inequalities

Section 2.7 of textbook

1)

$$4m^3 + 5m^2 - 2m + 5 \geq -2m^2 + 5$$

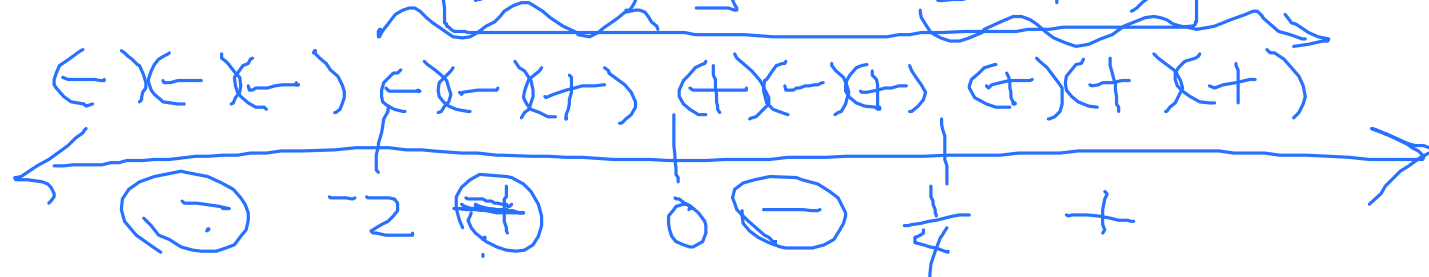
$$4m^3 + 7m^2 - 2m \geq 0$$

$$m(4m^2 + 7m - 2) \geq 0$$

$$(m)(4m-1)(m+2) \geq 0$$

$$\swarrow \quad m=0 \quad | \quad m=-\frac{1}{4} \quad | \quad m=-2$$

$$[-2, 0] \cup \left[\frac{1}{4}, \infty\right)$$



$$2) \quad 3x^3 + 2x - 20 < 2x + 4$$

$$3) \quad \frac{3x^2 - 8x + 5}{x^2 - 25} \geq 0$$

$$\frac{(3x-5)(x-1)}{(x-5)(x+5)} \geq 0$$

CV $x = \frac{5}{3}$

	$\frac{(-)(-)}{(-)(-)}$	$\frac{(-)(-)}{(-)(+)}$	$\frac{(-)(+)}{(-)(+)}$	$\frac{(+)(+)}{(-)(+)}$	$\frac{(+)(+)}{(+)(+)}$
$x = 1$					
$x = 5$	$(+)$	$-$	$(+)$	$-$	$(+)$
$x = -5$					

HW pg 146-147 27-42,55-59 all
PLUS EXTRA PROBLEM:

$$\frac{6r^2 + 7r + 2}{r^2 - r} \leq 0$$